

Use of a Biological Safety Cabinet (BSC)

- If the BSC blower is off, turn it on and allow it to run for at least five minutes prior to beginning work.
- All interior surfaces of the BSC and the surfaces of any supplies or equipment placed inside the cabinet should be wiped down with an appropriate disinfectant (70% ethanol or 10% bleach followed by sterile water or 70% ethanol).
- Only put necessary supplies and materials inside the BSC. Excess materials disrupt air flow and decrease the containment efficiency of the BSC.
- Do not cover the front or rear air grilles with paper, absorbent pads, or any other materials. Covering the air grilles creates dead zones and may allow escape of airborne materials from the cabinet.
- Arrange supplies and materials so that your workflow is from clean to dirty.
- Place materials as far back in the BSC as you can comfortably reach.
- Minimize movement of your arms in and out of the BSC to prevent disruption of the laminar airflow. When moving your arms in and out of the BSC, move your arms perpendicular to the sash and avoid sweeping motions that will pull contaminated air out of the cabinet.
- If aspirator flasks are used, a sufficient amount of disinfectant (usually bleach) should be added prior to accumulation of waste so that it will be at an appropriate concentration (10% for bleach) after addition of waste. A HEPA filter should be placed between the collection flask and the house vacuum (HEPA filters are required at BSL3). If space allows, consider using two flasks in-line to provide overflow protection.
- When work is completed, wipe down all interior surfaces with an appropriate disinfectant.
- Spill clean-up procedures should be posted near the BSC.

What materials can be used in a BSC?

- BSCs are designed to protect individuals and the environment from potentially infectious aerosols and to maintain a sterile workspace inside the cabinet.
- Open flames should not be used inside a BSC. Open flames disturb the airflow and can allow airborne particles to escape and may also damage the HEPA filter located in the ceiling of the BSC.
- Most BSCs are not suitable for work with volatile chemicals. Recirculating air within the BSC can concentrate vapors and increase the potential for a fire. Consult with EH&S to see which chemicals (and quantities of those chemicals) you can safely use in your BSC.